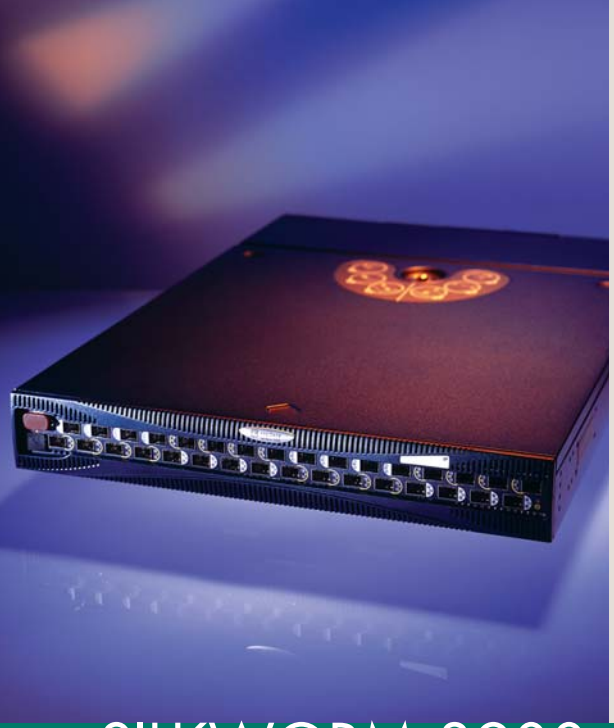


The 2 Gbit/sec Brocade SilkWorm 3900 Enterprise Fabric Switch provides an entry point to enterprise SANs, improving availability, performance, and manageability at an attractive price.

SILKWORM 3900

Highlights

- Provides 32 ports in a 1.5U enclosure along with auto-sensing 1 and 2 Gbit/sec interfaces for seamless integration with existing fabrics
- Leverages Brocade Advanced Fabric Services to provide the highest levels of SAN performance, security, and manageability
- Meets mission-critical availability requirements with network resiliency, automatic data path rerouting, hot code activation, and redundant, hot-pluggable components
- Increases performance by employing Brocade Inter-Switch Link (ISL) Trunking to create a data path with up to 8 Gbit/sec throughput per trunk
- Provides substantial cost savings by supporting a SAN infrastructure that increases productivity, maximizes IT resource utilization, and reduces capital expenditures
- Supports FICON® and FICON in-band management (CUP)

Increased Flexibility for Evolving SAN Requirements

The Brocade® SilkWorm® 3900 32-port, auto-sensing Fibre Channel switch provides an intelligent and cost-effective solution to meet a wide range of Storage Area Network (SAN) requirements. As the latest addition to the Brocade 2 Gbit/sec fabric switch family, the SilkWorm 3900 is ideal for organizations that face rapidly changing storage requirements.

With the performance capabilities of an enterprise switch and the cost-effectiveness of a modular switch solution, the SilkWorm 3900 enables a flexible SAN infrastructure. Designed for midsize to large storage networks, the SilkWorm 3900 enables organizations to implement a SAN infrastructure that best meets their current needs and expands seamlessly as their storage requirements evolve. The SilkWorm 3900 provides a complete solution for a departmental SAN fabric, as a small core, or an edge switch extending the reach of an enterprise core-to-edge SAN built around Brocade SilkWorm Directors (see Figure 1).

Based on a third-generation Brocade intelligent architecture, the SilkWorm 3900 provides a highly available, scalable, and secure foundation for SAN applications such as high-speed data backup, server and storage consolidation, remote mirroring, and long-distance data replication.

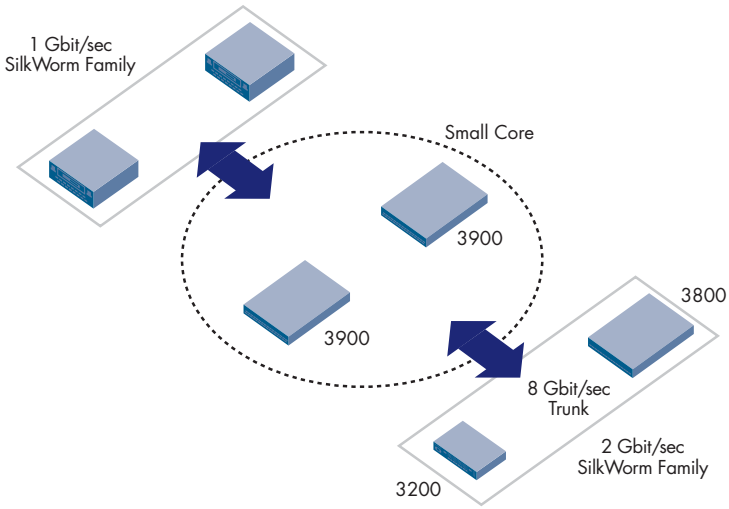


Figure 1. The SilkWorm 3900 provides a reliable building block for departmental SANs and a high-performance edge switch for enterprise core-to-edge SANs.

HIGH AVAILABILITY FOR BUSINESS CONTINUANCE

By combining the proven reliability of the SilkWorm switch family with a wide range of hardware and software availability features—such as non-disruptive upgrades of switch software—the SilkWorm 3900 supports a SAN fabric capable of delivering overall system availability greater than 99.999 percent.

The core-to-edge SAN model uses redundant fabrics, hot-pluggable components, and multiple data paths to help ensure high availability across the fabric. In addition, Brocade Fabric Shortest Path First (FSPF) enables the fabric to automatically isolate problems and reroute traffic around failed links onto alternate paths. As a result, the SilkWorm 3900 provides a SAN infrastructure solution that is designed to meet the most demanding business continuance requirements.

INDUSTRY-LEADING PERFORMANCE

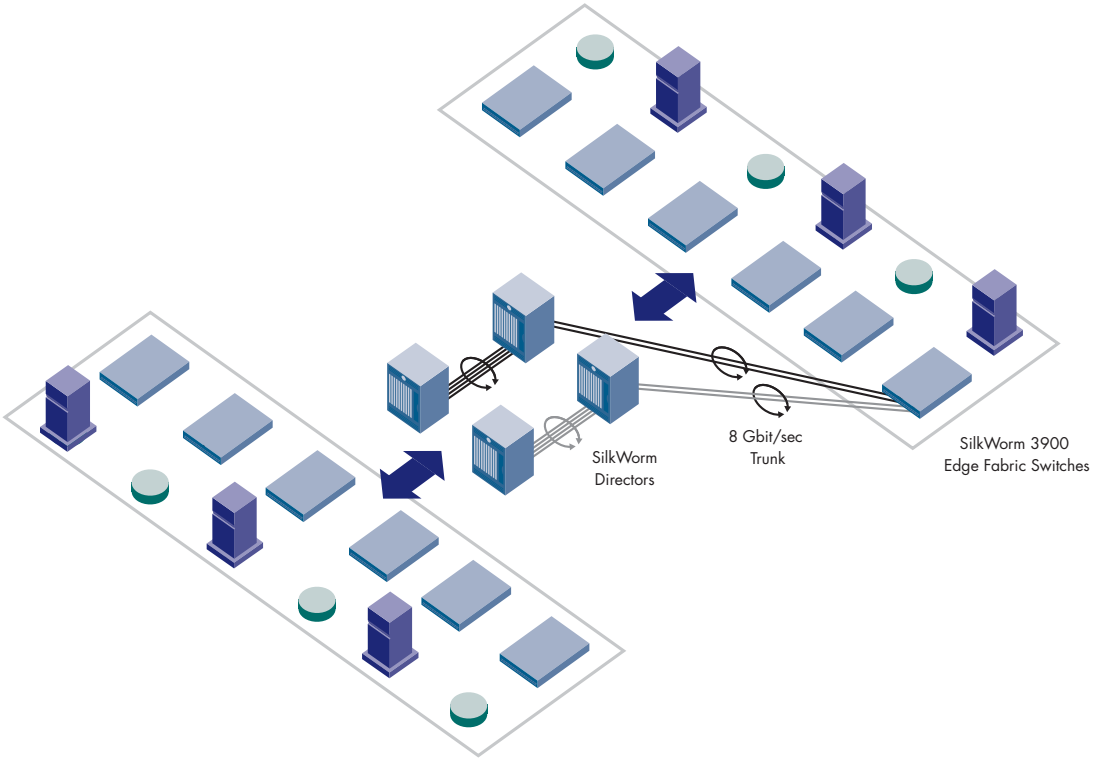
The SilkWorm 3900 provides numerous business advantages for organizations that want to increase application performance and operational productivity. It can deliver up to 128 Gbit/sec of aggregated throughput, with 32 ports capable of 2 Gbit/sec full-duplex performance. To achieve even higher performance, organizations can use Brocade ISL Trunking, which combines as many as four ISLs into a single logical ISL with up to 8 Gbit/sec throughput.

Fibre Channel speed is also possible at longer distances for remote operations. By leveraging the Brocade Extended Fabrics feature and Dense Wave Division Multiplexing (DWDM) technology, storage networks can span up to 100 km over Metropolitan Area Networks (MANs) at high speed—significantly enhancing disaster recovery operations.

A DESIGN TO LEVERAGE INTELLIGENCE IN THE FABRIC

To help maximize IT investments and reduce costs, the SilkWorm 3900 is designed to leverage the industry's only intelligent fabric services architecture. The proven intelligence in the Brocade Fabric OS® and third-generation Brocade ASIC technology enables the high levels of security, management, and performance required by the most demanding SAN environments.

Organizations can utilize leading capabilities such as frame filtering and Brocade Advanced Fabric Services to unlock the intelligence of the Brocade SAN fabric for a variety of applications. For instance, Brocade Advanced Zoning enables organizations to implement robust,



hardware-enforced zoning based on World Wide Name (WWN). Advanced Performance Monitoring provides fabric-wide performance analysis to support tasks such as load balancing and application charge-back. And ISL Trunking provides 8 Gbit/sec throughput to support high-performance applications.

OPEN SAN MANAGEMENT

The SilkWorm 3900 simplifies SAN management by networking core and edge switches under a common management platform based on Brocade Fabric OS. An embedded real-time operating system, Fabric OS includes standard management interfaces, a full range of management tools, and a Brocade Fabric Access API that supports third-party SAN management applications. This open systems approach enables heterogeneous device connectivity, automatic data routing, and a seamless upgrade path among all SilkWorm products.

To simplify SAN administration and reduce management costs, the SilkWorm 3900 supports the following functions:

- Simple Network Management Protocol (SNMP)-based interfaces to access switch information
- Switch management through a command line interface, WEB TOOLS, or Fabric Manager
- End-to-end fabric visibility through Advanced Performance Monitoring
- Real-time health monitoring through Fabric Watch
- Third-party SAN management application development through SMI-S and the Fabric Access API

SEAMLESS UPGRADES AND INVESTMENT PROTECTION

To protect existing investments, the SilkWorm 3900 provides backward and forward compatibility with the SilkWorm family of switches. In addition, translative mode capabilities enable legacy private loop devices to join the Fibre Channel SAN fabric.

The SilkWorm 3900 integrates with heterogeneous environments that include operating systems such as Windows NT, UNIX, z/OS, and Linux—giving organizations the flexibility to select storage solutions that best match their particular needs. As a result, these organizations can more easily implement cost-efficient and highly manageable enterprise SAN fabrics.

HIGHER FABRIC SECURITY FOR CRITICAL INFORMATION

The SilkWorm 3900 is designed to provide the highest level of SAN fabric security to help organizations safeguard their critical information. For example, Brocade Zoning logically groups a SAN fabric into secure zones to help ensure that SAN-attached devices can access only their authorized storage resources. Advanced Zoning provides even more control over the fabric through robust hardware-enforced zoning by WWN. These capabilities enable organizations to simplify administration while significantly increasing their control over data access.

MAXIMIZING SAN INVESTMENTS

Brocade and its partners offer complete SAN solutions to meet a wide range of technology and business requirements. These solutions include education and training, support, service, and professional services to help optimize SAN investments. For more information, contact an authorized Brocade sales partner or visit **www.brocade.com**.

Systems Architecture

Fibre Channel ports	32 universal ports (E, F, and FL)
Interoperability	SilkWorm 2000, 3000, and 12000 switches
Performance	Auto-sensing of 1 Gbit/sec and 2 Gbit/sec port speeds
ISL Trunking	Up to four 2.125 Gbit/sec ports per trunk; up to 8.5 Gbit/sec per ISL trunk
Aggregate bandwidth	128 Gbit/sec end-to-end
Switch core	Non-blocking
Fabric latency	<2.1 µsec. with no contention, cut-through routing
Maximum frame size	2112-byte payload
Classes of service	Class 2, Class 3, Class F (inter-switch frames)
Port types	FL_Port, F_Port, and E_Port; self-discovery based on switch type (U_Port); optional port type control
Data traffic types	Fabric switches support unicast, multicast (256 groups), and broadcast
Media types	Hot-pluggable, industry-standard Small Form-Factor Pluggable (SFP), LC connector; Short-Wavelength Laser (SWL); Long-Wavelength Laser (LWL); Extended Long-Wavelength Laser (ELWL); distance depends on fiber optic cable and port speed
Laser	Short-wave, long-wave, and extended long-wave
Fabric services	Simple Name Server, Registered State Change Notification (RSCN), Alias Server (multicast), and Brocade Zoning, Advanced Zoning, Extended Fabrics, Fabric Watch, ISL Trunking, and Remote Switch (some services are optional)
Options	Redundant power supply, and rack-mount kit

Management

Supported software	Telnet, SNMP, WEB TOOLS, and Fabric Manager (optional)
Management access	10/100 Ethernet (RJ-45), serial port
Diagnostics	POST and embedded online/offline diagnostics

Mechanical Specifications

Enclosure	Back-to-front airflow, power from rear 1.5U, 19-in.–EIA compliant
Size	Depth: 58.56 cm (23.06 in) Height: 6.55 cm (2.58 in.) Width: 42.86 cm (16.87 in.)
Weight	Single power supply weight: 14.33 kg (31.60 lbs) Double power supply weight: 16.24 kg (35.80 lbs)
Mounting option	Rack-mountable in standard rack; Telco-style mid-mounting

Environment

Temperature	Operating: 10° C to 40° C (50° F to 104° F) Nonoperating: -25° C to 70° C (-13° F to 158° F)
Humidity	Operating: 20% to 85% non-condensing at 40° C (104° F) Nonoperating: 10% to 85% non-condensing, at 70° C (158° F)
Altitude	Operating: up to 3,000 m (9,800 ft) Nonoperating: up to 12 km (40,000 ft)
Shock	Operating: 80 G, 2.4ms, half-sine Nonoperating: 20 G, 11 milliseconds, half-sine wave
Vibration	Operating: 0.5 G, 5-500 Hz Non-operating: 2.0 G, 5-500 Hz

Power

AC Input	Nominal: 100 to 240 VAC auto-ranging; 5.0 A
Frequency	47 to 63 Hz

For information about supported SAN standards, visit www.brocade.com/sanstandards

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